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## Alcimedes

In the USA, there is an increasing recognition that emergency physicians should be trained in clinical forensic medicine. Millions of victims of violence-related injuries are treated in hospital emergency departments each year. Although emergency physicians are well prepared to manage the medical issues of acutely ill patients, they often do not receive formal residency training in clinical forensic medicine. Two case reports are used to advance the argument for such training in an article in *Annals of Emergency Medicine* (2007;**50**:733–38). The authors conclude that there exists an unmet need in emergency medicine residency training with regard to clinical forensic medicine. Filling this need will improve the quality of care for emergency department patients; facilitate social justice; and help communities convict perpetrators of crimes against others. Similar arguments are just as applicable in the UK.

According to expert forensic literature, human skin is considered to be one of the least convenient surfaces for recovering ridge skin impressions. However, research published in *Science and Justice* (2007;47:136–40) has demonstrated that fingerprint impressions were recoverable from the skin of both living and dead bodies using standard powder dusting techniques. Certain dusting powders produced better results than others but impressions remained visible for only 30 minutes after initial deposition – thus limiting the usefulness of the technique.

The interpretation of genital injury is an important aspect of the work of forensic physicians involved in the examination of complainants and suspects of sexual abuse. To the long list of possible causes of injuries to the male external genitalia now has to be added that of elephant stampede (*Injury* 2008;39:136). A case report explains that the incident occurred when the unfortunate victim was attending a 'call of nature' early one morning in the coffee plantation estate adjacent to his residence in India. In addition to a degloving scrotal injury the patient sustained injuries to the left chest and left thigh, and sadly died 33 days later of pneumonia. To the knowledge of the authors, this is the first report highlighting an elephant stampede as a rare and unusual cause of injury to male external genitalia.

Distinguishing between menstrual blood and blood due to trauma can be of crucial importance in rape cases. The techniques currently available to aid differentiation are said to possess several pitfalls when applied to casework samples with unknown origin and possibly unfavourable storage conditions. However, a new technique based on messenger RNA profiling and the menstrual blood marker MMP-7 appears to offer much greater promise. The results of recent research (*For Sci Int* 2008;174:54–8) show that the detection of MMP-7 is a reliable, specific and sensitive method for the identification of menstrual blood. False positive results were never observed and negative results could be regarded as true negative when the sample quality and size was sufficient. Further research is required to demonstrate the feasibility of this approach in real casework situations.

Cigarette burns seen on a potential victim of abuse should always raise serious concerns that demand further investigation. A useful review reminds us that a glancing accidental contact with a lighted cigarette may cause a first or seconddegree burn but is insufficient to cause a third-degree (full thickness) burn (For Sci Int 2008;176:200-8). First and second degree-burns, which may be accidental, heal within 2–3 weeks often with hyperpigmentation but no scarring. By contrast, third-degree cigarette burns take 6-8 weeks or more to heal and do so with scarring. In order to differentiate between a second-degree burn that may have been caused accidentally and a third-degree burn that was deliberately inflicted, it is usually necessary to monitor the healing process in order to determine whether or not the burn heals with scarring. Observation over a period of a few weeks also allows the forensic physician to distinguish between a burn and other conditions that may cause similar appearances, such as local infection.

Methadone is a well established substitute treatment for opiate dependence and forensic physicians will be very familiar with the common side effects of central nervous system and respiratory depression associated with acute intoxication. However, they may be less familiar with the cardiac toxicity associated with chronic use of large doses of methadone that has only recently been recognised. A case report in the Journal of Emergency Medicine (2008;34:287-90) describes a 40-year-old woman who developed torsades de pointes (a rare form of polymorphic ventricular tachycardia) whilst on a bus en route to the clinic where she collected her daily dose of 135 mg methadone. The markedly prolonged QT interval associated with this condition shortened after discontinuation of methadone. She was eventually discharged on a reduced dose of daily methadone and with an implanted cardioverter-defibrillator.